BS 7856:2013

BSI Standards Publication

Code of practice for special design and other features of alternating current watthour meters for active energy (MID accuracy classes A and B) for use in the UK

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 20, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 August 2013. It was prepared by Technical Committee PEL/13, *Electricity meters*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

BS 7856:2013 supersedes BS 7856:1996, which is withdrawn.

Information about this document

This standard has been revised to take account of changes in metering technology which have occurred since publication of the previous edition in 1996. Primarily, the standard is designed to provide a basic procurement specification; this is in recognition of concerns about increased circuit loadings, the need for improved mechanical performance of meter terminations, the introduction of smart metering technology, and changes brought about following the introduction of the Measuring Instruments Directive [1].

Relationship with other publications

The standard recommends several conditions which are more stringent than currently exist within other European metering standards, reflecting the differences in working practices that exist between the United Kingdom and other European Union member states. It is, however, important to note that this standard is intended to augment the provisions of certain European standards (see Clause 2, "Normative references") and so, in instances where this document is non-prescriptive, the provisions of these other standards should prevail and therefore be taken into consideration.

Use of this document

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions in this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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1 Scope

This British Standard gives recommendations for special design and other features of newly-manufactured alternating current watthour meters with ratings up to and including 100 A I_{max} for installation in domestic and small commercial/industrial premises within the United Kingdom.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 6004:2012, *Electric cables – PVC insulated and PVC sheathed cables for voltages up to and including 300/500 V, for electric power and lighting*

BS 7647, *Radio teleswitches for tariff and load control*

BS EN 50470-1:2006, *Electricity metering equipment (a.c.) – Part 1: General requirements, tests and test conditions – Metering equipment (class indexes A, B and C)*

BS EN 50470-2, *Electricity metering equipment (a.c.) – Part 2: Particular requirements – Electromechanical meters for active energy (class indexes A and B)*

BS EN 50470-3:2006, *Electricity metering equipment (a.c.) – Part 3: Particular requirements – Static meters for active energy (class indexes A, B and C)*

BS EN 62052-21, *Electricity metering equipment (a.c.) – General requirements, tests and test conditions – Part 21: Tariff and load control equipment*

BS EN 62055-31:2005, *Electricity metering – Payment systems – Part 31: Particular requirements – Static payment meters for active energy (classes 1 and 2)*

IEC 60502-1, *Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV) – Part 1: Cables for rated voltages of 1 kV (Um = 1,2 kV) and 3 kV (Um = 3,6 kV)*

3 Terms and definitions

For the purposes of this British Standard the terms and definitions given in BS 7647, BS EN 50470, BS EN 62052-21, BS EN 62055-31 and IEC 60502-1 apply.

4 Mechanical features

4.1 For a single-phase, two-wire meter:

a) the overall dimensions of the meter and spacing of fixing holes should be in accordance with the appropriate values given in Table 1; and

b) the dimensions and spacing of the terminal should be in accordance with the appropriate values given in Table 1 and shown in Figure 1.

For polyphase meters, the current terminals of directly-connected meters having rated currents up to and including 100 A should be in accordance with dimensions K, L and P given in Table 1.

For any current terminal, into which a correctly prepared cable conforming to BS 6004:2012, 8181Y, of down to 16 mm^2 is inserted, no visible conductive material should be exposed.